(9) Pressure of the mixture of exhaust and dilution air entering the CVS metering device (or pressure drop across the CFV), the pressure increase across the device, and the temperature at the inlet (if applicable). The temperature may be recorded continuously or digitally to determine temperature variations (if applicable).

(10) The number of revolutions of the positive displacement pump accumulated while exhaust samples are being collected (if applicable). The number of standard cubic feet metered by a critical flow venturi would be the equivalent record for a CFV (if applicable).

(11) The humidity of the dilution air.

NOTE: If conditioning columns are not used (see §§ 86.122 and 86.144) this measurement can be deleted. If the conditioning columns are used and the dilution air is taken from the test cell, the ambient humidity can be used for this measurement.

(12) Curb idle engine speed during the test.

(13) Idle exhaust CO concentration (dry basis).

(14) Idle exhaust raw CO_2 concentration (if applicable).

(15) Dilute bag sample CO and CO_2 concentrations (if applicable).

(16) Total CVS flow rate with calculated dilution factor for the idle mode (if applicable).

[48 FR 52252, Nov. 16, 1983, as amended at 49 FR 48149, Dec. 10, 1984; 70 FR 40441, July 13, 2005]

§86.1544–84 Calculation; idle exhaust emissions.

(a) The final idle emission test results shall be reported as percent for carbon monoxide on a dry basis.

(b) If a CVS sampling system is used, the following procedure shall apply:

(1) Use the procedures, as applicable, in 40 CFR 1065.650 to determine the dilute wet-basis CO and CO_2 in percent.

(2) Use the procedure, as applicable, in 40 CFR 1065.650 to determine the raw dry-basis CO_2 in percent.

(3) Convert the raw dry-basis CO_2 to raw wet-basis. An assumption that the percent of water by volume in the raw sample is equal to the percent of raw dry-basis CO_2 minus 0.5 percent is acceptable. For example:

10.0% dry CO_2 − 0.5%=9.5% water

(1.00 − 0.095) (10.0% dry CO_2)=9.05% wet CO_2

(4) Calculate the CVS dilution factor (DF) by:

$$DF = \frac{\text{Raw wet } CO_2 - \text{background } CO_2}{\text{Dilute wet } CO_2 - \text{background } CO_2}$$

(5) Convert the dilute wet-basis CO to dilute dry-basis values. An assumption that the percent of water by volume in the sample bag is 2 percent is acceptable. For example:

Dilute dry CO=(dilute wet CO)/(1.00–0.02)

(6) Calculate the raw dry-basis CO values by:

Raw dry CO=(DF) (dilute dry CO)

(c) If the raw exhaust sampling and analysis system specified in 40 CFR part 1065 is used, the percent for carbon monoxide on a dry basis shall be calculated using the procedure, as applicable, in 40 CFR 1065.650.

(Secs. 202, 203, 206, 207, 208, 301a, Clean Air Act, as amended; 42 U.S.C. 7521, 7522, 7525, 7541, 7542, 7601a)

[48 FR 52252, Nov. 16, 1983, as amended at 49 FR 48149, Dec. 10, 1984; 50 FR 10708, Mar. 15, 1985; 51 FR 24613, July 7, 1986; 70 FR 40441, July 13, 2005]

Subpart Q—Regulations for Altitude Performance Adjustments for New and In-Use Motor Vehicles and Engines

AUTHORITY: Secs. 215 and 301, Clean Air Act, as amended (42 U.S.C. 7550 and 7601).

SOURCE: 45 FR 66956, Oct. 8, 1980, unless otherwise noted.

§86.1601 General applicability.

This subpart applies to manufacturers of motor vehicles and motor vehicle engines (hereafter referred to as vehicles) which are subject to the requirements of title II of the Clean Air Act. This subpart applies to the following vehicles:

(a) 1968 and later model year light-duty vehicles and light-duty trucks.

(b) 1970 and later model year heavy-duty engines built after December 31, 1969.